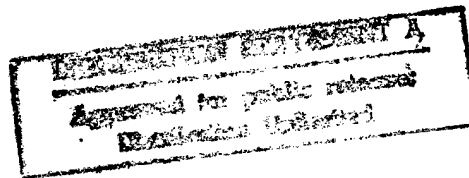


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11 August 1982



# Worldwide Report

TELECOMMUNICATIONS POLICY,  
RESEARCH AND DEVELOPMENT

No. 232

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11 August 1982

WORLDWIDE REPORT  
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BRIEFS

**KHULNA-MONGLA PHONE LINK--KHULNA** July 4--An automatic telephone exchange of 400 line unit at Mongla the second biggest port in Bangladesh came into operation on Saturday. With the inauguration of this exchange direct telecommunication link is being established between Khulna and Mongla says a PID handout. The STD number from Mongla to Khulna is 92 and that of Khulna to Mongla is 93. The charge of the STD call during day time is equal to one call per minute and during night is equal to two calls per minute. [Dacca THE BANGLADESH OBSERVER in English 5 Jul 82 p 1]

**EXPERIMENTAL TELEVISION RELAY--CHITTAGONG**, July 5--Two relay centres of the Bangladesh Television one each at Rangamat and Cox's Bazar have started functioning on experimental basis. The Rangamati Centre started relaying of BTV programmes from May 28 and the Cox's Bazar Centre from May 19. These two centres will be formally opened soon. The Rangamati Relay Centre built at a cost of Taka five lakh will have one kilowatt capacity and will cover 10 miles around Rangamati town of Chittagong Hill Tract district. The four kilowatt Cox's Bazar Relay Centre constructed at a cost of Taka seven lakh will cover Chokoria Thana Kutubdia Moheshkhali and St. Martin areas under net work of BTV programmes. [Dacca THE BANGLADESH OBSERVER in English 6 Jul 82 p 1]

CSO: 5500/7184

## INFORMATION MINISTER ADDRESSES PARLIAMENT COMMITTEE

Bombay THE TIMES OF INDIA in English 8 Jul 82 p 9

[Text] NEW DELHI, July 7 (PTI)--The government is considering a proposal to set up four high power shortwave transmitters in the metropolitan cities so that programmes from All India Radio Calcutta, Delhi, Bombay and Madras can be heard in large parts of the country.

This was stated by the minister of information and broadcasting, Mr. Vasant Sathe, at a meeting of the consultative committee of members of parliament attached to his ministry held here today. Mr. Sathe said that the proposal would be discussed with the planning commission during the mid-term appraisal of the sixth plan.

He said that the four metropolitan cities were already provided with short-wave transmitters but these were of medium power only and were established in 1939. While this power was adequate when the transmitters were installed, in the present situation due to congestion in the shortwave band and interference from other stations, their service has been rendered inadequate.

Some members raised the question of circulars issued by AIR to various stations regarding news coverage of the January 19 strike. They wanted copies of the circulars to be made available to members of the committee.

The minister said that circulars were confidential and could not be made available to the members. The committee appreciated the enterprise shown by Door-darshan in telecasting live Wimbledon men's singles final.

## Newsprint Supply

Referring to the problems of small and medium newspapers raised by some members, the minister said that the government was trying to help these papers by giving them weightage in the release of DAVP advertisements and newsprint. He said that the number of small and medium newspapers was so high--nearly 18,000--that it was not possible for the government to release advertisements to all of them.

However, the share of small and medium newspapers in DAVP advertisements had been going up steadily over the past two years. The government had now taken a positive policy decision that the proportion of advertisements to be released to big and small and medium newspapers would be 40:60, he said.

As regards the supply of newsprint to small and medium newspapers, the Union government had suggested at the recent conference of information ministers of states that the state governments should arrange distribution of newsprint after cutting them into sheets.

He said that their quota would be released to the state governments through the State Trading Corporation. At the same time, Mr. Sathe said, measures had to be taken to check the growth of mushroom papers.

The members welcomed the government's decision requiring the newspapers to publish everyday the print order of the previous issue. This would help in monitoring the consumption of newsprint.

CSO: 5500/7180



COMMON NATIONAL TELEVISION PROGRAM PLANNED

New Delhi PATRIOT in English 28 Jun 82 p 7

[Text] The common national programme of 90 minutes duration to be telecast simultaneously from all the Doordarshan kendras is expected to get started on 15 August, reports UNI.

The programme, which was to have begun on one June was postponed by a few weeks because the microwave channels linking various Doordarshan kendras with Delhi were being tested and checked by the Posts and Telegraphs authorities.

According to informed sources, Doordarshan hoped to inaugurate this programme with the telecast of the Independence Day function at the historic Red Fort.

The programme will be beamed from 2000 to 2130 hours every day. It will comprise two news bulletins--in Hindi and English--which will be put out by the Delhi Doordarshan Kendra. All Doordarshan Kendras will feed their segments to Delhi.

It will also have selected programmes from other Doordarshan units on current affairs, music, dance, variety shows and youth activity.

The programmes would be selected on the basis of All India appeal, quality and thematic content. They will mainly be in English and Hindi.

With the introduction of this programme, it will be possible to increase the telecast time as local studios will be available for production of additional programmes.

A central planning and production unit is being set up at the Directorate General of Doordarshan in Delhi for implementing the scheme.

Steps are being taken to prepare one month's programmes in advance.

CSO: 5500/7172

## INFORMATION MINISTERS DISCUSS TELEVISION COVERAGE

New Delhi PATRIOT in English 4 Jul 82 p 5

[Text]

**S**TATE Governments have urged the Centre for maximum television coverage for themselves in its plans for expanding the Doordarshan network.

Information Ministers of the states, who met in the Capital on Saturday sought to impress on Union Information Minister Vasant Sathe the imperative need for more television centres and relay stations in their states, pleading that this would help the development process and extension projects in agriculture, health and education.

Mr Sathe, who briefed them on the projects for radio and television including the use of the INSAT, assured that detailed programmes had been worked out to increase the reach of the media.

West Bengal, however stressed the need to give more autonomy to Doordarshan and All India Radio and also called on the Government to implement the recommendations of the Press Commission.

Briefing newsmen after the meeting of the Information Ministers, Union Information Secretary S B Lal said the conference recommended that distribution and exhibition of films should be included in the Concurrent List. The right of the states to collect entertainment tax, however, would be protected.

The conference unanimously endorsed the Centre's proposal to start a daily national programme for a duration of 90

minutes in Hindi and English on the TV network from 15 August, Mr Lal said.

Earlier, inaugurating the conference, Mr Sathe called upon the States' information agencies to work in close cooperation with the central media to inculcate a sense of participation among the people in the nation-building activities.

He said it was with this objective in mind that "We are trying to increase the reach of the media all over the country."

Maharashtra urged the Centre to consider earmarking special time for telecasting important State events.

Gujarat Chief Minister Madhavsinh Solanki urged the Centre to assist his government in installing 2500 indirect TV reception sets in his State to provide entertainment and to make TV an effective media of instruction for the common man.

Madhya Pradesh demanded a TV network covering Bhopal, Indore, Gwalior and Jabalpur on a priority basis.

Haryana Minister for Social Welfare and Public Relations Shakuntla Bhagwaria, demanded that a TV station should be set up in the State, preferably at Hissar, to highlight the distinctive cultural, historical and geographical achievements of its people.

## PLANS FOR SATELLITE USE IN PHONE SERVICE TOLD

Bombay THE TIMES OF INDIA in English 26 Jun 82 p 5

[Text]

NEW DELHI, June 25.

TELEPHONE facilities via satellite will be available for commercial use from July 1, according to the communications minister, Mr. C. M. Stephen.

Delhi, Bombay and Calcutta are among the earth stations linked to the INSAT-1A spacecraft (launched on April 10) that have been fully tested and would be thrown open for commercial use.

The other earth stations are located at Shillong, Srinagar, Jodhpur, Bhuj, Panjim, Minicoy, Kohima, Itanagar, Agartala and Gangtok.

Five of the remote areas—Leh, Kavaratti, Port Blair, Car Nicobar and Alizawl—and the Madras main station now working with INTELSAT would switch over to INSAT very soon.

This would be followed by the commissioning of primary stations at Ahmedabad, Hyderabad, Ernakulam, Bhubaneswar, Jaipur, Lucknow, Patna and Jullundur.

Mr. Stephen told newsmen today that the posts and telegraphs department had done intensive tests on the earth station equipment in order to ensure efficient performance of the system as a whole.

Asked if the satellite system would be financially viable, the minister replied that it might not be. But the main thing was that it would link even remote areas to the national communications system and this would fill a great need.

The cost of the earth stations to the posts and telegraphs department is Rs. 63.18 crores. The two satellites (INSAT-1A and INSAT-1B) will provide 8,000 telephone circuits. INSAT-1A will be functional for three years and will be followed by INSAT-1B.

In addition to 28 earth stations, there will be three mobile stations. The stations at Delhi, Hyderabad and Bhubaneswar will provide TV link-ups for doordarshan. Delhi, Bombay, Madras and Calcutta will offer similar radio link-ups. Delhi will have facilities for receiving meteorological data and transmitting the processed data to centres at Bombay, Madras and Calcutta. The earth stations will also have satellite data communication facilities for the Oil and Natural Gas Commission.

This had yielded dividends. For example, Mr. Stephen said the production of high-power amplifiers had already started in the country (at ECIL in Hyderabad).

CSO: 5500/7167

POOR POWER SUPPLY AFFECTS RADIO, TELEVISION

Calcutta THE SUNDAY STATESMAN in English 27 Jun 82 p 7

[Text] NEW DELHI, June 26--Erratic power supply in different parts of the country has of late resulted in an increase in the number of breakdowns in AIR and Doordarshan centres, reports PTI. The Centre has drawn the attention of all States and Union Territories to the problem.

The Secretary, Ministry of Information and Broadcasting, in a letter to the State Information Ministers has asked them to take up the issue in their respective States at the level of the Chief Minister. Firm policy instructions should be issued by each State and Union Territory to its respective electricity board to ensure uninterrupted power supply to all the AIR and Doordarshan centres, the Secretary has said.

The matter will be dealt with at length at the conference of the State Information Ministers beginning here on July 1.

According to the Information and Broadcasting Ministry, programme hours lost because of non-availability of power this year is more than the loss in the corresponding period last year. The year 1980-81 witnessed 1.22% breakdowns owing to power supply resulting into loss of 8,078 programme hours.

In the eastern region, the power supply breakdowns during 1980-81 was of the order of 4.2%, the Ministry said.

All-India Radio has to depend upon the electricity boards to a great extent for power supply to its transmitters. The AIR and Doordarshan centres, however, have strived to become self-sufficient in terms of emergency power for its studio centres.

Though the requirements of power are not very large for studio centres, unreliable and frequent power breakdowns had led AIR and Doordarshan to resort to captive diesel generating sets in most of its studio installations.

This has decreased the percentage of breakdowns at studio centres. However, during normal periods of operations, when the studios depend upon the power supply from the electricity boards, it is necessary to ensure that the voltage and frequency of the supply remain within the specified limits.

But as regards transmitting centres, the power requirements are relatively higher, depending on the power of the transmitter installed. Here again, with transmitter up to the power of 10 KW, Diesel generators of 62.5 KVA capacity or lower have been provided. It is neither economical nor feasible to have huge generators established and maintained by AIR at its transmitting centres for meeting the needs of its high-power transmitters.

CSO: 5500/7169

## NEW SYSTEM DEVELOPED FOR RAPID TRANSMISSIONS

Madras THE HINDU in English 4 Jul 82 p 4

[Text]

A telegram handed in recently at the Secunderabad telegraph office reached Tiruchi within two hours.

This was possible due to the "store and forward telegram system" developed by the Tamil Nadu Circle, based on microprocessor equipment developed by the department with assistance of ECIL, Hyderabad. The system is currently linked with Secunderabad and the experiment has been found to be satisfactory. Mr. C. M. Stephen, Union Communications Minister, told pressmen here today.

This is how the system operates; a telegram is first entered into a microprocessor-based memory which automatically analyses the address details and retransmits to the correct destination automatically. The process is very fast and transmission is done within a minute. If a line is interrupted, the message is stored in the system and when restored, transmission is automatic.

The experimental network is theoretically capable of handling 30,000 messages a day. However, since teleprinters at feeding telegraph offices are operated manually, only about 6,000-7,000 messages a day could be sent.

**System likely to be extended:** The system was proposed to be extended to Bombay, Calcutta and Delhi. Once the network link was established, direct transmission would start

automatically reducing inordinate delays.

Mr. U. D. N. Rao, General Manager, Telecom Circle, Tamil Nadu, said, telegrams were received irrespective of the availability of route in a particular direction, stored and 'fired out' to reach the other end overcoming inhibitions or obstructions.

Mr. Stephen said the sorting of mail for transport through RMS could be done at a facility near the railway station and not necessarily inside the RMS coach. The Railways pertinently asked the question whether the Postal Department was itself sorting out its mail sent by air and sea.

The Railway Ministry was finding it difficult to provide special RMS coaches when the number of train passengers increased. The matter was under examination and a decision would be taken shortly.

**Bid to tone up service efficiency:** The Minister said he was now touring various parts of the country to study the operation of telephone and trunk call services. He was in Calcutta yesterday and held discussions with the officers there. Today, he did so with senior officers of the P&T Department in Madras.

He would visit Lucknow on July 4, on a similar mission. The idea was to tone up the service efficiency. Mr. Stephen expressed his determination to "wipe out overtime" expenses as he felt it "is an anti-labour activity".

CSO: 5500/7177

## PLANS FOR NEW DELHI TELEVISION TOWER DETAILED

New Delhi PATRIOT in English 27 Jun 82 p 4

[Text]

Delhi Doordarshan is to acquire a new 235-metre high TV tower in Pitampura, the main features of which will be a 20 KW transmitter, a revolving restaurant and a viewing gallery.

According to an official release on Saturday the tower which is expected to be completed in about two years is being constructed at a cost of Rs 3.15 crore by the National Building Construction Corporation. The NBCC has engaged a well-known West German consultant and an expert in RCC towers for the project.

It will be twice the height of Qutab Minar.

The 20 km transmitter will increase the range of Delhi Doordarshan from 68 kms to 95 kms. At present Delhi has a 10 kw transmitter.

Minister of Information and Broadcasting Vasant Sathe will lay the foundation stone of the tower on 3 July.

The new tower to be constructed at a 4-acre site in Pitampura in West Delhi will be a landmark which will provide the visitors a panoramic view of the Capital. The first 165 metre length of the tower will be in RCC and the remaining 70 metre in steel for TV antenna.

The revolving restaurant to be constructed at a height of 147 metres will have a seating capacity for about 100 people. The viewing gallery which will be at a level 4 metres higher will accommodate about 150 people.

With the installation of the new transmitter the service range of Delhi Doordarshan will increase from 93 lakh to 129 lakhs (1971 census). There will be a significant increase in coverage of rural population which will go up from 25.5 lakhs to 60 lakhs.

## ARMY PLANS TO EXPAND USE OF COMPUTERS

Calcutta THE STATESMAN in English 30 Jun 82 p 9

[Text]

**NEW DELHI, June 29.**—Computers will be used in the Army in a big way for improved operational and logistics preparedness, reports UNI.

According to official sources, the computer expansion programme envisages installation of 10 additional computers in the next three years.

The system will also link the Army headquarters with various commands and field forces.

A computer was recently installed at the Army headquarters for message switching. Computers will be used in the field forces for circuit switching and routing of telephone calls.

The expansion programme envisages the setting up of static computer complexes at selected modal locations, mobile militarized computer systems for field forces to cover vital functions of command, control and operational logistics, and fire control functions in the battlefield.

The computers will be inter-linked with communications systems to be provided by the Corps of Signals.

An ICL-1904 computer was installed at the signals enclave in the Cantonment area to meet the requirements of the Army headquarters. This was replaced by a more versatile and powerful ICL-

2950 computer system in 1980.

The election of Army chiefs and promotion of the top brass of the Army have been carried out through computers—not to speak of keeping track of 500,000 ordnance items—from a pin to a tank.

Modern armies throughout the world have switched to computers during the past two decades.

It is in this context of introducing modern management techniques with automated information systems that the Army integrated data plan was conceived in 1968-69.

The introduction of computers in the Army has resulted in substantial financial savings, faster decision-making and timely information.

Training of Army officers is being carried out at the Military College of Telecommunication Engineering at Mhow since 1970 to meet the requirement of trained manpower for software and hardware.

This institution not only trains Army personnel but those of the Navy, the Air Force and other defence establishments.

CSO: 5500/7174



## BRIEFS

PIT SATELLITE USE--BOMBAY, June 25 (PTI)--The chairman of the Press Trust of India, Mr. P. K. Roy, today spoke of possibilities of PTI availing itself of the facilities provided by APPLE and INSAT 1-A satellites to improve the quality of its communication links and reach out to new areas in the near future. In his speech to the 34th annual general meeting, read in absentia, Mr. Roy said that PTI, in co-operation with scientific institutions, was studying these possibilities and hoped that before the year-end it would be able to derive considerable benefit from the satellite system. The pilot project in Bombay for computerisation had enabled the development of software required for the agency's operations. For the photo service, expert studies were in progress for choice of equipment, which would ensure optimum usefulness and utmost economy, he said. As a result of concerted effort, PTI's revenue increased in 1981 to a little over Rs. 3.6 crores from Rs. 2.87 crores in 1980. [Text] [Bombay THE TIMES OF INDIA in English 26 Jun 82 p 7]

PRESS COUNCIL ON INFORMATION POLICY--SRINAGAR, June 27--The Press Council of India has made a number of recommendations to the Centre to make suitable amendments in India's Official Secrecy Act, the Contempt of Court Act, the Defamation Act and in the parliamentary privileges procedure concerning journalists and newspapers. Disclosing this in informal talks with reporters here yesterday, the Chairman of the Press Council of India, Mr Justice A. N. Grover, said amendments to all these Acts were necessary to "maintain the dignity and freedom of the Press". Mr Justice Grover said the Press Council was of the opinion that no journalist in any part of the country should be forced or intimidated by any State or Central Government agency to divulge the source of news even if a matter would be described by these agencies as "of public importance". He said that, at the same time the journalists should strictly adhere to a "code of ethics". He said that at present members of the Press Council were engaged in evolving a "fresh code of conduct for journalists", which would be shortly recommended to the Centre for its approval, Mr Justice Grover pleaded for more powers for the Press Council so that it could equally censure erring Central or State Government officials as it was empowered to do against an erring journalist of a newspaper on a complaint received from any Government or private agency. He demanded that their recommendations to censure a journalist or an official be placed before Parliament or a State legislature as the case might be. [Text] [Calcutta THE STATESMAN in English 28 Jun 82 p 9]

HILL REGIONS' TELECOM FACILITIES--NEW DELHI, June 28 (PTI)--Long distance public telephones and combined post and telegraph offices will now be provided in

hilly and tribal areas with a population 2500 each, within ten km. radius. P and T department has taken this decision to extend telecom facilities as part of the rural development programme in the country, Mr. C. M. Stephen, Union communication minister, told the meeting of the Consultative Committee attached to his ministry here today. This decision will result in the opening of 4000 public call offices, he said. Out of 437 recommendations of the Sarin committee on P and T facilities 202 have been implemented till now, and another 183 are under consideration, he said. [Text] [Bombay THE TIMES OF INDIA in English 29 Jun 82 p 6]

THIRD WORLD INFORMATION CENTER--Secretary, Ministry of External Affairs, Ramesh Bhandari, said the role of journalists was to not only collect news but also transmit information regarding developments taking place within the country. Therefore there has to be a two-way traffic between journalists and Government. This view was endorsed by Joint Secretary, External Publicity, Mani Shankar Aiyar who said the setting up of an information centre in New Delhi would receive all possible assistance, administrative as well as financial, from the Government. Resident representative of UNDP, Michael J Priestley said the United Nations system welcomed such a proposal and would do everything to support it. He said the United Nations was proposing to set up a global system called 'devnet' for collection and distribution of development information to various developing countries. According to the proposal, 'devnet' would use existing satellite channels leased by participating countries and would operate through regional bureaux and national centres in 60 developing countries. The study, carried out by the Forum of Financial Writers (FFW) and sponsored by ICRIER, analyses the inadequacy of the flow of information and makes out a strong case for setting up an information centre in India by FFW which could cater to the needs of a variety of people engaged in writing on economic matters especially development. [Text] [New Delhi PATRIOT in English 1 Jul 82 p 5]

TRUNK CALLS VIA INSAT--COCHIN, June 30 (UNI)--Telephone subscribers in the mainland can now make trunk calls to Minicoy in the Union Territory of Lakshadweep via INSAT-1A. This follows the commissioning of the satellite-based Ernakulam-Minicoy trunk route on an experimental basis. [Text] [New Delhi PATRIOT in English 1 Jul 82 p 5]

NORTHEAST TELEVISION FACILITIES--IMPHAL, July 5--A joint working group consisting of representatives of the ministries of Communication and Information and Broadcasting has been set up for studying the feasibility of using microwave towers in Shillong and Gauhati for TV coverage of Asiad 1982 with the help of INSAT-1. An official said the experiment was feasible and the people of this region would be able to view TV for the first time. Mr. Prakash Mehrotra, Governor of Assam and Meghalaya and Chairman of the North-Eastern Council, (NEC) has been urging the Central Government to extend TV facilities to this region. According to NEC sources, over 3,000 km of vital roads in this region would be improved or laid during the Sixth Plan. Six new railway lines (length 213 km) have been constructed in the region. NEC has requested the Centre to build a rail-cum-road bridge at Jogighopa. [Text] [Madras THE HINDU in English 6 Jul 82 p 7]

TELECOM UNIT FOR KHARAGPUR--NEW DELHI, July 8 (PTI)--A new telecommunication factory is being set up by the Posts and Telegraphs department at Kharagpur (West Bengal) in the sixth five-year plan. It will manufacture various line store items for open wire telecommunication lines for opening public call offices, rural telephone exchanges and for giving new telephone connections. The factory will be equipped with modern mechanised foundry incorporating the latest technological advances in this field. It will be for the first time in India that a automatic flaskless moulding equipment will be installed in the factory, employing digital electronic controls. A team of nine engineers from the P and T telecom factories was recently deputed for a three-week intensive training programme in the U.K. where they were exposed to the latest foundry technologies, quality controls, maintenance and management techniques and production processes. Besides visiting some of the premier foundry installations in the U.K. employing latest equipments, the engineers had also received valuable training from international experts drawn from top foundry institutions of international standard such as British cast iron research association, foundry industrial training board and experts from manufacturers of foundry equipments of world repute such as Disa, Acme, British Moulding Machines and GEC. The proposed new foundry installation in the new telecom factory at Kharagpur will go a long way in relieving the acute shortage of essential telecommunication line store items and will contribute significantly to the achievement of the plan targets for opening of new telephone connections. [Bombay THE TIMES OF INDIA in English 9 Jul 82 p 23]

MIZORAM MEDIA IMPROVEMENTS--AIZAWL, July 8--Fifty colour television sets with programmes transmitted through INSAT will be installed in Mizoram at an estimated cost of Rs 12 lakhs, official sources said here today, reports PTI. An additional short wave radio transmitter of 10 KW will also be installed, besides the existing medium wave 20 KW one as part of a widening media coverage in the Union Territory, within easy reach of the Bangladesh and Burmese media. The Press information Bureau and field publicity net work will be extended to reach interior areas of the Union Territory. [Calcutta THE STATESMAN in English 9 Jul 82 p 7]

BIHAR MINISTER'S REQUESTS--PATNA, July 8--The Bihar Information and Public Relations Minister, Mr Ramashray Prasad Singh, has strongly pleaded for setting up a television complex here during the current five-year plan, reports UNI. Mr Singh, who attended the conference of State Information Ministers in Delhi recently said land for the purpose had been earmarked and the Government would be able to transfer its possession shortly. He said it was a matter of deep anguish that the State's capital did not have a centre for TV programmes. The relay station at Muzaffarpur operates within a very short radius. The Information Minister said the transmitters in Patna and Ranchi were not powerful. The Union Minister for Information and Broadcasting had assured him that this would shortly be changed to 200 KW stations he added. He said the buildings being constructed would be able to take a load of only 100 KW stations and would not serve the purpose of covering a vast area of the State for All India Radio programmes. He had impressed upon the Union Minister for Information and Broadcasting the need to have this matter examined so that 200 KW stations were installed in Patna and Ranchi at the earliest. [Calcutta THE STATESMAN in English 9 Jul 82 p 13]

# SPACE TECHNOLOGY DISCUSSED

Karachi DAWN in English 18 Jul 82, Economic & Business Review p I

[Article by Shaheen Sehbai]

[Text]

PAKISTAN has started manufacturing long range high altitude rockets for scientific uses, and all basic sophisticated facilities for launching, monitoring and even destroying it during flight have been acquired.

Except raw materials of stringent specifications and special propellants, all other material used in the manufacture of these rockets is indigenous.

A full fledged rocket production plant which manufactures rockets starting with basic raw materials is in operation producing complete rocket engines and their propellants.

Rocket motors are fired on "static test benches" which hold it captive while its performance is monitored and recorded.

Special instrumentation laboratories have been established which cover diversified fields of electronics such as microprocessors and digital circuit design, telemetry systems, control elements, satellite ground stations and sophisticated testing.

These facts emerged in a 75-minute interview with the Chairman of SUPARCO, Pakistan's equivalent of NASA, Mr. SALIM MAHMUD, at his Karachi office.

## OVERHAUL

Although Mr. Mahmud would not commit himself on the possible military uses of the rockets being manufactured, tested and launched in Pakistan, at the Sonmiani pads near Karachi, he was articulate in discussing the scientific and research role being played by SUPARCO after it was completely overhauled and given a fresh and bold mandate by the President of Pakistan, over a year ago.

"We had to import rockets from one country or the other for our space programme experiments and so we decided to have our own manufacturing facilities. That we have done now. It is a substantial improvement, a step towards self-reliance. It is a technological achievement for us as it requires a high standard of technology," he told me.

Q: Has this increased our defence capabilities in some way?

A: We deal with scientific experiments. But I have highlighted the role of science and technology in economy, trade, business and industry in my recent writings. Science and technology are crucial in all these areas. If you do not use modern scientific methods you cannot solve your problems. Those problems can arise in any area. After all, the defensive weapon systems (of today) rely all the way

on these modern scientific and technical developments. But "perse" we are not engaged in defence weapons work."

## TARGETS

Q: Could you direct the rockets you launch, to specific targets?

A: For scientific experiments you need to have control on the direction they are going to take. We don't want them to fall on Karachi. It (rocket) is tracked by a high precision radar, controlled by a computer. If it starts going in a wrong direction, then we have the facility to destroy it in flight. It has a built-in mechanism with an explosive charge set off by a coded command signal which destroys the rocket (whenever considered necessary). We are proud of it."

Mr. Mehmud also talked about the infra-structure required for the launching of rockets into space. Pakistan he said was one of the very few developing countries to have acquired the capability of launching rockets to high altitudes so far 500 km. How many developing countries can do that, he asked. "We manufacture them and can also supply them to anyone who needs them for experiments."

The story of rocket-launching by SUPARCO, the short name for Pakistan Space and Upper Atmosphere Research Commission, is very old. Its first rocket was launched in 1962 which went to an altitude of only 160 KM. Since then SUPARCO, was almost lying in cold storage with very limited funds and work, until 1981, when the Government decided that it should play a more dynamic and important role in national affairs and progress.

A new Chairman, the present one, was appointed, its status was raised to that of a Commission and an Ordinance was issued to, in order what Mr. Mehmud says, "legitimise SUPARCO".

President Zia-ul-Haq told SUPARCO to shun its introvert attitude which had led many people to question its existence and cast doubts on its activities which some thought were super-secret.

## MANY USES

More information started filtering out of SUPARCO and lately an attempt has been made to inform the people about what it has been doing. In fact the list is quite impressive and involves all major spheres of national development, besides the production of some highly advanced gadgets (see second story).

Some areas where SUPARCO is providing valuable data and information include: localisation of cyclones and hurricanes, detecting natural resources, monitoring floods and river patterns, pinpointing locust breeding spots, estimating green lands and cultivated crops, spotting pest infested crops, gauging snow levels and how much water would be flowing down rivers when it melts. These are some uses from satellite pictures which SUPARCO can receive directly from satellites, through ground stations nearing completion. "These have an immense economic impact for Pakistan", Mr. Mehmud believes.

Besides these, communications through satellites is another vital field where SUPARCO is playing a pivotal role. It is at the moment preparing for the 1986 launching of Pakistan's first satellite, basically a communications outfit with some added uses as well.

Will it also have the Remote Sensing Device which can monitor movements of enemy troops and vehicles?

Mr. Mehmud says "no". Because it will be at a very high altitude of 22,300 miles and the pictures taken from that height cover almost a third of the globe. So the clarity is not there and it cannot be of help. This device is good for satellites orbiting the earth at low altitudes and only the Russians and Americans have such satellites.

## INDIAN SATELLITE

The SUPARCO Chairman says too many things should not be put into one satellite, like the Indians have done. "Their satellite represents one with too many things. So they have got into difficulty and part of it is yet not finished. And in the process they have consumed so much fuel in the satellite adjustment motor that the life of that satellite is going to be greatly reduced. Besides TV and telephone systems, the Indian satellite has a camera on board which takes pictures, every 30 minutes, of the earth."

Does then the Indian satellite represent a threat to our security?

"It is difficult to give a categorical answer. Communications, TV broadcasts, weather monitoring and other fields covered by satellites, integrate into the overall potential of the country and I maintain that scientific and technological potential of any country directly constitutes an input into its ability to defend itself. Things apparently not related have a contribution to make to the defence and offensive capabilities of a country," Mr. Mehmud says. "How can I say they are not using the satellite for their defence purposes. Scientific and military uses of a satellite are two faces of the same coin."

# DIRECT TV RECEPTION FROM SATELLITE PLANNED

Karachi DAWN in English 18 Jul 82, Economic & Business Review p I

[Article by Shaheen Sehba]

[Text]

PAKISTANI TV viewers could well be the first in the world to watch TV programmes directly from satellites by plugging in a small gadget to their sets — a DBSR (direct broadcasting satellite receiver) — developed and tested by SUPARCO, Pakistan's space agency.

The DBSR consists of a small set and a dish type antenna to be fixed at the roof top (pictures). It can receive signals direct from any DBS (direct broadcasting satellite), eliminating the TV stations in between.

According to SUPARCO Chairman, the DBSR has been successfully tested in Pakistan and SUPARCO is ready to commercially produce and market it.

The only snag at the moment is the final policy decision by the Government whether to let the public use DBSRs. A similar decision has recently been taken by the American Government where DBSRs would be in

common use by 1986. Private companies are planning to start telecasts on 30 channels in USA for DBSRs.

A high level meeting of the Executive Committee of the Space Research Council of Pakistan, to be held in Islamabad tomorrow, July 18, will examine the prospects of the DBSRs for public use.

The SUPARCO Chairman thinks a large number of factors, including socio-cultural issues were involved in deciding the matter. The final decision may have to be taken by the President of Pakistan himself.

"But the broad policy outline regarding DBSRs would be known after the July 18 meeting. As far as SUPARCO is concerned, we could manufacture 50 DBSRs every month for sale to the public. We are ready," the SUPARCO Chairman said.

At the moment only two satellites can be watched if a DBSR is fitted to a set in Pakistan. Another satellite, the ARABSAT, being launched by 21 Arab countries, will also join in by 1984.

Informed sources when con-

tacted said it was extremely difficult for the Government to allow DBSRs in Pakistan at the moment. "There is hardly any chance of the project being approved although it would be a great advance in science and technology" one source said.

When Pakistan launches its own satellite in 1986, DBSRs may then become a feasible proposition because it would broaden the scope of TV transmissions on an unlimited scale. Every village in the remotest area of the country can receive clear and uninterrupted TV programmes through the DBSR.

SUPARCO estimates show a DBSR set plus the antenna, would cost around Rs.6000 in Pakistan at the moment. The cost of a similar device in USA is around \$200. With mass production, the cost could come down.

The device presents a wide scope for exports, a businessman told DAWN "It could bring sizeable foreign exchange as it would be an instant hit in the Gulf states and the oil-rich countries. But the only problem would be permission by the governments to import the gadget."

## SRI LANKA

### BRIEFS

SUBMARINE COMMUNICATION PROJECT--Sri Lanka will participate in an eight-nation Indian Ocean submarine cable communication project, the government has decided. It has apportioned Rs. 300 million as Lanka's contribution to this communications system which will become operational in 1985. The other countries in the project are Singapore, Indonesia, Djibouti, Saudi Arabia, Egypt, Italy and France. A memorandum of understanding among the eight partners of this South East Asia Europe cable system was signed in Paris last May. Detailed plans are being worked out following initial project studies which have shown that the project is technically and economically viable. Since the submarine cable system will be commissioned towards the end of 1985, it will help meet the increasing communications demand as the present earth station would have reached its capacity by then. Meanwhile, standby facilities are being provided at the earth station through the Indo-Sri Lanka microwave system. This system will enable Sri Lanka to share the Indian earth station facility as well as the Penang-Madras cable under an agreement entered into recently. [Text] [Colombo SUN in English 21 Jul 82 p 1]

CSO: 5500/5875

## BRIEFS

NEW DIGITAL EXCHANGE--The Sitra telephone exchange went digital this week, with new equipment being installed in the recently-finished exchange building. Previously there were two small exchanges on the island. The equipment, known as remote line units, came from the Mahooz exchange, which had operated on a digital system since 1980. The ringing and dialling tones have now changed for numbers beginning 730 and 731 and a new routing tone has been introduced to signify that a call is being connected. This is a series of fast, high-pitched "pips." The new system has a capacity of 1,500 lines which can be extended to 4,500, while the two old exchanges had a total of 2,000 lines.

CSO: 5500/4732



## BRIEFS

'ABBAS-BUSHARAH MEETING--Khartoum, July 4 (SUNA)--Communications and Transport minister Khalid Hasan 'Abbas and Kordofan governor Al-Fatih Busharah discussed here yesterday the needs of Kordofan Region in the field of transport and telecommunications, SUNA learnt. The meeting decided to present a memorandum to the minister of Finance and Economic Planning to establish an earth Satellite station in Al-Ubayyid. The meeting also decided to dispatch a team of telecommunications experts to Ubayyid after the 'Id holiday to determine the necessary cables for Ubayyid telephone exchange and to build five telex lines between Ubayyid and Khartoum and to facilitate telephone contact between Ubayyid and Kassala from Kaduqli and Al-Nuhud. In addition, the meeting discussed the full and efficient coverage of the area by TV service. [Text] [Khartoum SUNA in English No 4176, 4 Jul 82 p 8]

CSO: 5500/5012

GHANA

JAPAN TO PROVIDE LOAN FOR TELECOMMUNICATIONS

AB281417 Accra Domestic Service in English 1300 GMT 28 Jul 82

[Text] Japan is to give Ghana a loan of nearly 5.9 billion yen for a telecommunications expansion project. The amount which is approximately \$26 million or 72 million cedis will be used to establish microwave radio link between Accra, Kumasi, Tamale and Bolgatanga. Exchange notes to this effect were signed in Accra this morning by the PNDC [Provisional National Defense Council] secretary for finance and economic planning, Dr Kwesi Botwe, and the Japanese ambassador to Ghana, Mr Masatada Higaki. The loan will be given after a later agreement between Ghana and the Japanese Overseas Economic Cooperation Fund. The loan will attract 3.5 percent interest and covers 30 years with a 10-year grace period.

Speaking after the signing, Dr Botwe acknowledged that the PNDC has been unhappy about the near collapse of most of Ghana's infrastructure, which is a source of frustration to many. He said the telephone network in particular has deprived the rural masses of any benefits of modern telecommunication systems. Dr Botwe stated that Ghana is particularly pleased with the timing of the loan since it will complement other telecommunication rehabilitation projects in the pipeline. The implementation of the project, Dr Botwe noted, also stands to reduce wasteful expenditures on fuel and put Ghana ahead in her drive for improvement in her telecommunication system.

He proposed the training of personnel to operate and maintain the sophisticated equipment, because the PNDC is bent on reversing the past trend of expensive equipment not benefiting the country due to lack of maintenance personnel. Mr Higaki said Japan is prepared to help Ghana out of her numerous difficulties, the main one being the resuscitation of the economy. He added that it is Japan's desire that the telecommunications expansion project will help Ghana to maintain the momentum in efforts geared toward national development. Mr Higaki hoped the project should not only help Ghana to conserve fuel, but also to promote foreign trade. The PNDC secretary for transport and communications, Alhaji Idrissu Mahama, was at the ceremony.

CSO: 5500/5871

## TPTC'S PERFORMANCE 'BADLY AFFECTED' BY ECONOMIC SITUATION

Dar es Salaam DAILY NEWS in English 21 Jul 82 p 3

[Article by Hamidu Bisanga]

[Text]

THE Tanzania Posts and Telecommunications Corporation (TPTC) plans to provide 20,000 telephone lines by 1984 in addition to the existing 18,000 lines to cope up with an increasing demand for telephone services.

Briefing newsmen on the position of TPTC in the face of the current adverse economic situation, the Corporation's Director-General, Ndugu J.W. Maeda, said the planned development would be financed under two loans totalling 400 million/-. but declined comment on the identity of the donor countries.

He said expansion of exchanges was already going on at Mbeya, Arusha, Tabora, Dar es Salaam and Dodoma. Work was also going on to link Mtwara, Lindi and Newala.

The Lake Victoria regions — Kagera and Mwanza — would also be linked with Kigoma while another link would be provided between Songea, Tunduru and Lindi.

The Mbeya, Dodoma, Kigoma and Dar es salaam expansions had been necessitated by the im-

plementation of the PANAF-TEL link which is aimed at providing direct telephone link between the northern and southern parts of Africa, he said.

Ndugu Maeda said the Corporation's performance had been badly affected by the present poor economic situation in the country.

He said lack of foreign exchange was the major factor contributing to the present unsatisfactory condition of the Corporation which, he said, had not been able to undertake substantial expansion and acquire spare parts for its network.

Transportation was another factor contributing to the Corporation's present poor state but this was largely due to lack of spare parts for the Corporation's motor vehicles used for servicing its equipment, he said.

Ndugu Maeda said the Bank of Tanzania had reduced its foreign exchange allocation for TPTC year after year, pointing out that in 1974 TPTC had asked for 174million/- but only 31 million/- was given and the figure dropped to four million/- for the first half of

this year for which TPTC had asked for 53million/-.

This had resulted in the drop of the Corporation's development rate from 12.5 per cent a year in 1978 to 2.3 per cent last year, he said.

Under these circumstances, the Corporation was losing at least 25million/- in foreign exchange for its failure to link international calls from abroad with its local exchange because of either breakdowns or overloading, Ndugu Maeda said.

On the Corporation's failure to repair broken down telephones or exchanges, Ndugu Maeda said this was a result of lack of spare parts. The problem was complicated further by the old cable system existing in the country which dates back to the 1950s, he said.

He pointed out TPTC was working hard to minimise breakdowns. Already, the Corporation had diverted funds for its development projects to provide for servicing of the existing network in form of purchases of spare parts and other items like cables, he said.

## NEW SYSTEM TO IMPROVE TELEPHONE COMMUNICATIONS

Dar es Salaam DAILY NEWS in English 20 Jul 82 p 3

[Text]

MASASI and Newala telephone subscribers will now be able to communicate directly with Mtwara and the rest of the country following the completion of an ultra high frequency radio system at a cost of 3,229,660/-.

Before that, all telephone calls from the two districts to Mtwara and beyond had to be routed via Lindi exchange.

A statement issued in Dar es Salaam yesterday by Tanzania Posts and Telecommunications Corporation said the new system has a capacity of up to 24 channels between Mtwara and Newala but initially 8 and 10 channels have been commissioned to Mtwara and Newala respectively.

Apart from improving the quality of service within Mtwara region and the rest of the country, Masasi and

Newala telephone operators will now have direct dialling access to exchanges or numbers where there is std facility in East Africa.

The statement stated that the Dar es Salaam to Mtwara *tropo-spheriscater* radio system which was equipped for 36 channels is now being expanded to its full capacity of 60 channels to cater for the ever increasing demand for services to and from that region.

"To improve even further our postal and telecommunication services in Mtwara region construction of a one storey building at an estimated cost of 24 million shillings commenced in October, 1981 and is due for completion in 1983. The new structure will house Mtwara Head Post Office and telephone exchange," the statement said.

CSO: 5500/5873

NEW STATE AGENCY WILL COORDINATE TELEPHONE SYSTEM

Copenhagen BERLINGSKE TIDENDE in Danish 5 Jul 82 p 7

[Article by Dan Axél]

[Text] J.K. Hansen, minister for public works and communication, has now published the rules on how the State Telecommunications Council shall be made up and what its functions will be. This is being done so that the various agencies that are to appoint representatives to the council can quickly make their selections, so that it can get under way.

He is Prof P. Nørregaard Rasmussen, Dr polit. Besides him there are to be 12 members of the council, which is to coordinate the telephone systems of the country. In addition to a representative of the Ministry of Public Works and Communication and the Ministry of Finance, the Council of Industry and the subscriber delegations of KTAS [Copenhagen Telephone Co.] and JTAS [Jutland Telephone Co.] will each select a representative.

The executive of P&T [Postal and Telegraph Agency] elects one KTAS, JTAS and the Fyn Communal Telephone Co. one each, the employees of P&T's telecommunications division elect two, and the employees of the concessionary telephone companies do the same.

J.K. Hansen, who has been criticized for being so long in reporting the telecommunication council plans, writes in answer to the communications committee of the Folketing that the Telecommunications Council will not have power of decision with regard to P&T, and with regard to the telephone companies only within the limits that prevail today.

The State Telecommunications Council will replace the Telephone Administration and its coordination commission. It is founded under the authority of two laws --of 1919 and 1922 respectively--and disbursements to the council and its secretariat must not involve costs for the state. The disbursements are to be paid for by the telephone companies and P&T.

The council, which is expected to get started with its work by the fall, will coordinate the public telecommunications "in the way that is best for the combined public telecommunications and the users in regard to technology, economy, servicing, and utilization of installations and personnel," the rules say.

Among other things, the Telecommunications Council will approve the creation and termination of positions in the telephone companies and will regulate telephone rates in such a way as to attain the greatest possible uniformity all over the country.

8815

CSO: 5500/2299

END